

PARTITIONED VECTOR PROCESSING**ABSTRACT OF THE DISCLOSURE**

5 A system and method for calculating memory addresses in a partitioned
memory in a processing system having a processing unit, input and output units, a
program sequencer and an external interface. An address calculator includes a set of
storage elements, such as registers, and an arithmetic unit for calculating a memory
address of a vector element dependent upon values stored in the storage elements and
the address of a previous vector element. The storage elements hold STRIDE, SKIP
10 and SPAN values and optionally a TYPE value, relating to the spacing between
elements in the same partition, the spacing between elements in the consecutive
partitions, the number of elements in a partition and the size of a vector element,
respectively.